

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of:

Lucian HIRSCH et al.

Serial No. 09/700,093

Group Art Unit: 2194

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Examiner: Li B. Zhen

For: METHOD AND COMMUNICATION SYSTEM FOR PROCESSING STATE INFORMATION
IN A MANAGEMENT NETWORK HAVING A NUMBER OF MANAGEMENT LEVELS

REPLY BRIEF

Commissioner for Patents
PO Box 1450
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Sir:

This is in response to the Examiner's Answer mailed September 1, 2010. On pages 4-16 of the Examiner's Answer, the Examiner repeated verbatim the rejection of claims 2-34 on pages 3-14 of the October 16, 2009 Office Action. The Response to Argument in item (10) on pages 16-27 of the Examiner's Answer is addressed below using the same identification of the arguments in the Appeal Brief that appear in the Examiner's Answer.

Argument (1)

The Examiner's Answer first asserted that U.S. Patent 5,903,568 to Tanaka et al. "teaches the concept of 'state realignment' ... [, i.e.,] to 'synchronize or update' the state information between two agents in different management levels" (Examiner's Answer, page 18, lines 10-13) because "Tanaka teaches storing states (information of managed objects) in parallel in different locations" (Examiner's Answer, page 18, lines 18-19). While storing state information in different locations is a prerequisite for performing "state realignment," it is the process of establishing the same set of states in both locations under specific circumstances that constitutes "state realignment" and that cannot be found in Tanaka et al.

The Examiner's Answer asserted that Tanaka et al. disclosed "state realignment" as follows:

The Lower-layer agent 107 in Tanaka gives an event notification produced in the managed object to the lower-layer manager 106 in a step 401. Event notifications which correspond to the upper layer in the managed-object correspondence information database 105 are reported to the upper-layer agent 102 in a step 406 (col. 11, lines 5 – 18). The upper-layer agent 102 reflects the contents of the event notification in the upper-layer MIB 103 in a step 407 (col. 11, lines 5 – 18). Therefore, the state (information of the managed object) in the upper-layer MIB 103 is updated (realigned or synchronized) with data from the lower-layer managed objects using the event notification.

(Examiner's Answer, page 19, lines 1-9). This description indicates that the Examiner does not understand the difference between ordinary operations that align states at two locations storing the same state information and "state realignment" as that term is used in the art. The description quoted above from the Examiner's Answer is consistent with the teachings of Tanaka et al., but ignores the prefix "**re**" in the term "state **re**alignment."

As discussed in the Appeal Brief and in previous communications with the Examiner, including the Interview on July 7, 2009, "'state realignment' is required if states [that] are stored in parallel in different locations, such as a manager and an agent in different management layers of a management network[,] ... are deemed for some reason to be no longer synchronized with each other" (Appeal Brief, page 5, lines 18-29). Examples of reasons why state realignment might be necessary are recited in the claims (see Appeal Brief, page 5, lines 21-25). Nothing has been cited in Tanaka et al., either in the rejection of the claims or in the Response to Argument section of the Examiner's Answer, suggesting that the "event notifications" described in Tanaka et al. are generated because there is some reason to believe that "the upper-layer MIB 103" (Examiner's Answer, page 18, line 20, citing Fig. 3 of Tanaka et al.) contains data that is different from that stored in "lower-layer MIBs 108" (Examiner's Answer, page 18, line 20). Rather, the portion of Tanaka et al. cited in the Examiner's Answer as teaching state realignment is part of a description of Fig. 8 which illustrates

[a]n event notification processing sequence of the OSI multilayer management system, for reflecting the result of an event notification N_{n-1} produced in the managed object M_{n-1} stored in the lower-layer MIB 103 in a managed object M_n stored in the upper-layer MIB 103 and related to the managed object M_{n-1}

(Tanaka et al., column 10, lines 37-42), i.e., ordinary operations of the OSI multilayer management system to maintain information "stored in the upper-layer MIB 103 and related to the managed object". As for the specific portion of the description of Fig. 8 in Tanaka et al. that was cited in the Examiner's Answer, i.e.,

event notifications which do not correspond to the upper layer occur in the managed-object correspondence information database 105. The managed object correspondence information converter 104 decides that those event notifications which do not correspond to the upper layer in the managed-object correspondence information database 105 are not required to be reflected in the upper layer in a step 405, and then finishes the event notification processing sequence. Event notifications which correspond to the upper layer in the managed-object correspondence information database 105 are reported to the upper-layer agent 102 in a step 406. The upper-layer agent 102 reflects the contents of the event notifications in the upper-layer MIB 103 in a step 407

(column 11, lines 5-18), this is not a description of "state realignment," but rather a description of filtering data in the managed-object correspondence information database to send only that which is relevant to the upper-layer MIB. Thus, it is submitted that the Examiner's Answer does not rebut the argument identified by "(1)" in the Examiner's Answer.

Argument (2)

Next, in response to the statement in the Appeal Brief that the "description of a 'service function; (in Tanaka et al.) is not equivalent to 'state realignment' as known in the art" (Appeal Brief, page 5, lines 17-18), the Examiner's Answer asserted that "the MIBs are synchronized in response to the event notification, which is a type of service function" (Examiner's Answer, page 19, lines 18-19). As discussed above, the disclosure of updating an MIB by event notification does not disprove the statement at page 5, lines 17-18 of the Appeal Brief which is quoted above and at the beginning of the last paragraph on page 16 of the Examiner's Answer. The attempt at disproving this statement in the paragraph spanning pages 19 and 20 of the Examiner's Answer ends with the statement that

When the upper-layer agent 102 reflects the contents of the event notification on the upper-layer MIB q03, the state (information of managed objects) in the upper-layer MIB 103 is updated (realigned or synchronized) with the data from the lower-layer managed objects through the event notification

(Examiner's Answer, page 20, lines 6-9). However, as discussed above, merely updating of a database containing state information stored in another database does not constitute "state *realignment*." Therefore, it is submitted that the Examiner's Answer does not rebut the statement at page 5, lines 17-18 of the Appeal Brief.

Argument (3)

The first paragraph on page 17 of the Examiner's Answer quoted the statement at page 5, lines 21-25 of the Appeal Brief that examples of reasons why state realignment might be necessary are recited in the independent claims and identified this statement as number (3) among the arguments in the Appeal Brief. It is submitted that page 5, lines 21-25 of the Appeal

Brief contains statements of fact supported by the limitations in the independent claims and nothing in the paragraph spanning pages 20 and 21 of the Examiner's Answer questions the validity of the statement quoted at the top of page 17 of the Examiner's Answer.

What is discussed in the paragraph spanning pages 20 and 21 of the Examiner's Answer is the teachings of the secondary reference, Published PCT Application 96/20547 by Carretta et al. The arguments in the Appeal Brief regarding the contents of Carretta et al. (in the paragraph spanning pages 7 and 8 of the Appeal Brief and the following paragraph) are not listed on pages 16-18 of the Examiner's Answer. Since the paragraph spanning pages 20 and 21 of the Examiner's Answer does not appear relevant to the statement identified as argument (3) at the top of page 17 of the Examiner's Answer, the relevance of the paragraph spanning pages 20 and 21 of the Examiner's Answer to the discussion of Carretta et al. in the Appeal Brief will be discussed next.

It is submitted that nothing in the paragraph spanning pages 20 and 21 of the Examiner's Answer rebuts the arguments related to Carretta et al. in the Appeal Brief. All of the portions of Carretta et al. cited at page 20, lines 12-13 and page 21, lines 1-2 of the Examiner's Answer are listed at page 7, lines 29-31 and discussed in the following sentences of the Appeal Brief. The Examiner's Answer implies that "a manager sending a request message for performing state realignment to the agent" (Examiner's Answer, page 20, lines 15-16) is described in Carretta et al., because "a MANAGER ... sends directives to AGENTS ... [where] the directives consist of requesting an event report service or a recorded events report recovery service; p. 7, lines 26-36" (Examiner's Answer, page 20, lines 16-18). This might seem to be relevant to the limitations in the appealed claims, except that the last eleven lines on page 7 of Carretta et al. cited at page 20, line 18 of the Examiner's Answer contains no description of the "EVENT REPORT and EVENT RECOVERY modules" (Carretta et al., page 7, line 30 and lines 34-35). It is submitted that the mere words "EVENT RECOVERY" are insufficient to teach any of the limitations in the claims.

Following the discussion of "EVENT REPORT and EVENT RECOVERY modules," the Examiner's Answer cited portions of Carretta et al. related to the timing of "communication between said manager and said agent" (Examiner's Answer, page 20, lines 18-19). It is submitted that the statement "state information is reported not only in the management system initialization step but immediately after each loss of alignment of the state information" (Examiner's Answer, page 20, lines 19-21, and Carretta et al., page 12, lines 11-13) is not clearly related to "state realignment" because it is unclear on page 12 of Carretta et al. whether the "state information [that] is reported" involves sufficient data to perform a "state realignment." As for page 26, lines

6-14 of Carretta et al., it is unclear why this description "of FIG. 3 which shows several MANAGER and AGENT blocks" (Carretta et al., page 26, lines 13-14) was cited in conjunction with page 12, lines 10-13, as the only thing in common is that the words "initialization step" appears on page 26, line 8 and page 12, line 12.

Thus, nothing in the paragraph spanning pages 20 and 21 (or any other portion) of the Examiner's Answer rebuts the arguments in the Appeal Brief that

Carretta et al. taken alone does not teach or suggest the claimed invention and ... the Examiner has failed to provide sufficient reasons under *KSR International Co. v. Teleflex Inc.* ... and *Ex parte Smith* ... [regarding] why one of ordinary skill in the art would have found it obvious at the time the invention was made to modify Tanaka et al. to add "state realignment" by "send[ing] only those state variable values different from the respective default values" as taught by Carretta et al.

Argument (4)

The second paragraph on page 17 of the Examiner's Answer identified as argument (4) that "[w]hatever occurs during 'event notification' is irrelevant to both the claims and the 'service function' that the lower-level manager 106 performs 'in response to a request from the upper-layer manager 101'" (Appeal Brief, page 6, lines 7-9 and Examiner's Answer, page 17, lines 5-7). In response, the Examiner's Answer asserted that "Tanaka teaches an operation that represents an operation request given to a managed object and the operation can be a request, response, or an event notification (col. 7, lines 3-10). These operations are the same as the service functions" (Examiner's Answer, page 21, lines 3-6). Nothing was cited in support of the assertion that the operations listed at column 7, lines 3-5 of Tanaka et al. "are the same as the service functions." In fact, all occurrences of the words "service function" in Tanaka et al. are used in conjunction with a "request," see, "an upper-layer agent 502 requested to provide a service ... accesses an upper-layer MIB ... to perform a management service function" (column 1, lines 20-23); "performing a service function in response to a management service request ... when the upper-layer agent 102 performs a service function" (column 6, lines 23-27); and "performing a service function in response to a request ... performing a service function in response to a request ... perform a service function" (column 6, lines 41-47). Thus, it is submitted the assertion that "an event notification ... [is] the same as ... [a] service function ..." (Examiner's Answer, page 21, lines 4-6) is not supported by the description of service functions in Tanaka et al.

The paragraph spanning pages 21 and 22 of the Examiner's Answer ends by repeating the assertion that "the state information of the managed object) in the upper-layer MIB 103 is updated (realigned or synchronized) with data from the lower-layer managed objects using the event notification" (Examiner's Answer, page 23, lines 7-9). It is submitted that nothing in the

rest of this paragraph in the Examiner's Answer supports the assertion that updating the MIB by processing an event notification constitutes "state realignment" for the reasons discussed above. Therefore, it is submitted that the paragraph spanning pages 21 and 22 of the Examiner's Answer does not rebut the statements in the Appeal Brief identified as argument (4) on page 17 of the Examiner's Answer.

The paragraph spanning pages 22 and 23 of the Examiner's Answer contains a further discussion of the teachings of Carretta et al. without any mention of why what is disclosed in Carretta et al. is relevant to any of the arguments in the Appeal Brief. Therefore, these statements will not be addressed in this Reply Brief.

Argument (5)

The third paragraph on page 17 of the Examiner's Answer identified as argument (5) that "the alarm forwarding illustrated in Fig. 8 of Tanaka et al. is not a technology which is suitable to reduce the amount of data needed to be exchanged for the purpose of state realignment" (Appeal Brief, page 6, lines 25-26, and Examiner's Answer, page 17, lines 16-19). In response, the last paragraph on page 23 of the Examiner's Answer noted "that Tanaka does not disclose a 'NO ALARM' alarm state and the claims do not recite a 'NO ALARM' alarm state" (Examiner's Answer, page 23, lines 16-17). The statement in the Appeal Brief, "during state realignment an alarm state of a managed object would be transmitted if the value of the alarm state is 'NO ALARM' and thus, reflects no deviation from its 'normal state'" (page 6, lines 22-24), is not about the teachings of Tanaka et al. (which as noted above does not relate to state realignment) or the claims (which recite a method that avoids transmitting the value of a "NO ALARM" alarm state), but rather about conventional state realignment, as discussed in the specification. The point of the sentence at page 6, lines 20-24 of the Appeal Brief was that if what is described in Tanaka et al. was state realignment, then the value of a "NO ALARM" alarm state would be sent from the managed object to the upper-layer manager.

Also responding to argument (5), the first paragraph on page 24 of the Examiner's Answer disputed the statement in the Appeal Brief that "Tanaka et al. is not a technology which is suitable to reduce the amount of data needed to be exchanged for the purpose of state realignment" (Appeal Brief, page 6, lines 25-26, and Examiner's Answer, page 24, lines 1-3). In support of this position it was noted that "[o]nly event notifications which correspond to the upper layer in the managed-object correspondence information database 105 are reported to the upper-layer agent 102 in ... step 406" (Examiner's Answer, page 24, lines 7-10). However, this would not reduce the amount of data transmitted during state realignment, because state realignment is

performed to ensure that the data stored in two locations is the same. The fact that one (or both) of the two locations store additional data that is not stored in the other location is irrelevant. One benefit of the present invention over the prior art, including Tanaka et al., is that not all of the data stored in both locations is transmitted during state realignment. The filtering of data to exclude data at the lower level that is not stored at the upper level would still send all of the data that is stored in both locations. Therefore, the Examiner's Answer did not rebut the statement that "Tanaka et al. is not a technology which is suitable to reduce the amount of data needed to be exchanged for the purpose of state realignment."

Argument (6)

The paragraph spanning pages 17 and 18 of the Examiner's Answer identified as argument (6) the statement at page 7, lines 5-7 of the Appeal Brief that "any prior art reference that does not address issues related to 'state realignment' is not particularly relevant to the claims ...". In response, the paragraph spanning pages 24 and 25 of the Examiner's Answer began by asserting that Tanaka et al. "teaches the concept of 'state realignment'" (Examiner's Answer, page 24, line 14). This assertion was rebutted above in the discussion of Argument (1). As discussed therein, the Examiner's "interpretation of 'state realignment' ... [as] 'to 'synchronize or update' the state information between two agents in different management levels" (Examiner's Answer, page 24, lines 19-20) is incorrect in equating synchronization by state realignment and merely updating. As discussed above, all updating of a database to match contents (selected or entire) of another database in a system where both databases are supposed to be in synchronization, does not constitute state realignment. In particular, the updating by event notification described in Tanaka et al. does not constitute state realignment. Therefore, it is submitted that as stated in the Appeal Brief, Tanaka et al. is not relevant to the claims.

As in the case of the response to Argument (4), the response to Argument (5) ends with a paragraph discussing the teachings of Carretta et al. without any mention of why what is disclosed in Carretta et al. is relevant to any of the arguments in the Appeal Brief, in particular the arguments in the paragraph spanning pages 6 and 7 of the Appeal Brief regarding the irrelevance of Tanaka et al. Therefore, these statements in the only full paragraph on page 25 of the Examiner's Answer will not be addressed in this Reply Brief.

Argument (7)

The first full paragraph on page 18 of the Examiner's Answer quoted the statement at page 7, lines 14-17 of the Appeal Brief that "[d]ue to the lack of teachings in Tanaka et al.

regarding 'state realignment,' one of ordinary skill in the art would not look to Carretta et al. for modification of Tanaka et al." The response to this argument in the paragraph spanning pages 25-27 of the Examiner's Answer begins by once again asserting that Tanaka et al. "teaches the concept of 'state realignment'" (Examiner's Answer, page 25, last line). As noted in the preceding section discussing Argument (6), this assertion was rebutted above in the discussion of Argument (1). As discussed therein, the Examiner's "interpretation of 'state realignment' ... [as] 'to 'synchronize or update' the state information between two agents in different management levels" (Examiner's Answer, page 26, lines 1-3) is incorrect in equating synchronization by state realignment and merely updating. As discussed above, all updating of a database to match contents (selected or entire) of another database in a system where both databases are supposed to be in synchronization, does not constitute state realignment. In particular, reporting "[e]vent notifications which correspond to the upper layer in the managed-object correspondence information database ... to the upper layer agent 102 in ... step 406 (col. 11, lines 5 – 18)" (Examiner's Answer, page 26, lines 9-11) does not constitute "state ~~realignment~~" for the reasons discussed above. Therefore, the teachings of Carretta et al. which are discussed at page 26, line 19 to page 27, line 18 of the Examiner's Answer do not provide reasons why "[o]ne of ordinary skill in the art would look to Carretta et al. for modification of Tanaka et al." (Examiner's Answer, page 27, lines 18-19). Thus, it is submitted that the Examiner's Answer does not rebut what was identified as argument (7) in the Appeal Brief.

For the reasons set forth above and in the Appeal Brief, including the arguments regarding Carretta et al. and Meandzija at page 7, line 29 to page 8, line 27, which were not address in the Examiner's Answer, it is submitted that claims 2-34 patentably distinguish over Tanaka et al., Carretta et al., and Meandzija, taken individually or in combination. Thus, it is respectfully submitted that the Examiner's final rejection of the claims is without support and, therefore, erroneous. Accordingly, the Board of Patent Appeals and Interferences is respectfully urged to so find and to reverse the Examiner's final rejection.

If any fee is required in connection with this Reply Brief, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

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